

Names: Key & _____

Perform the following conversions. Show your work! (1 pts ea.) /9

Questions 1-3 are Metric to Metric conversions.

1) $7.45 \times 10^{-5} \text{ hm} \rightarrow ??? \text{ mm}$

$$\frac{7.45 \times 10^{-5} \text{ hm}}{1} \times \frac{100,000 \text{ mm}}{1 \text{ hm}} = 7.45 \text{ mm}$$

2) $7.86 \times 10^{19} \text{ pg} \rightarrow ??? \text{ Gg}$

$$\frac{7.86 \times 10^{19} \text{ pg}}{1} \times \frac{1 \text{ Gg}}{1 \times 10^{21} \text{ pg}} = .0786 \text{ Gg}$$

3) $102.5 \text{ MHz (WDVE FM)} \rightarrow ??? \text{ KHz (AM)}$

$$\frac{102.5 \text{ MHz}}{1} \times \frac{1000 \text{ KHz}}{1 \text{ MHz}} = 102,500 \text{ KHz}$$

Questions 4-6 are US to US conversions.

4) 4.5 gallons \rightarrow ??? quarts

$$\frac{4.5 \text{ gal}}{1} \times \frac{4 \text{ qt}}{1 \text{ gal}} = 18 \text{ qt}$$

5) 2.00 miles \rightarrow ??? inches

$$\frac{2.00 \text{ miles}}{1} \times \frac{5280 \text{ ft}}{1 \text{ mile}} \times \frac{12 \text{ in}}{1 \text{ ft}} = 126,720 \text{ in}$$

6) 7.00 days \rightarrow ??? minutes

$$\frac{7.00 \text{ day}}{1} \times \frac{24 \text{ hr}}{1 \text{ day}} \times \frac{60 \text{ min}}{1 \text{ hr}} = 10,080 \text{ min}$$

Questions 7-9 are US to Metric or Metric to US conversions.

7) 5.00 gallons \rightarrow ??? liters

$$\frac{5.00 \text{ gal}}{1} \times \frac{3.79 \text{ L}}{1 \text{ gal}} = 18.95 \text{ L}$$

8) 135 pounds \rightarrow ??? Kilograms

$$\frac{135 \text{ lbs}}{1} \times \frac{1 \text{ Kg}}{2.20 \text{ lbs}} = 61.4 \text{ Kg}$$

9) 100. meters \rightarrow ??? yards

$$\frac{100 \text{ m}}{1} \times \frac{3.28 \text{ ft}}{1 \text{ m}} \times \frac{1 \text{ yd}}{3 \text{ ft}} = 109.3 \text{ yd.}$$

Challenge Question: Density is the amount of matter (mass) in a region of space (volume). [Density = $\frac{\text{mass}}{\text{volume}}$.] [Not Graded]

Convert the density of water 1.00 $\frac{\text{grams}}{\text{milliliter}}$ \rightarrow ??? $\frac{\text{pounds}}{\text{gallon}}$.

$$\frac{1.0 \text{ g}}{1 \text{ mL}} \times \frac{1 \text{ Kg}}{1000 \text{ g}} \times \frac{2.20 \text{ lbs}}{1 \text{ Kg}} \times \frac{29.6 \text{ mL}}{1 \text{ fl.oz.}} \times \frac{128 \text{ fl.oz.}}{1 \text{ gal}} = 8.34 \frac{\text{lbs}}{\text{gal}}$$